NASA Procedural Requirements

COMPLIANCE IS MANDATORY

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NASA Financial Information Systems

Responsible Office: Office of the Chief Financial Officer

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Preface

P.1 Purpose

This NASA Procedural Requirements (NPR) provides the financial management requirements for financial information systems.

P.2 Applicability

This NPR is applicable to NASA Headquarters and NASA Centers, including

Component Facilities and Technical and Service Support Centers. This language applies to JPL, other contractors, grant recipients, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements.

P.3 Authority

a. Chief Financial Officers (CFO) Act of 1990, Public Law 101-576, 31 U.S.C. § 902.

b. Federal Managers' Financial Integrity Act (FMFIA) of 1982, Public Law 97-255, 31 U.S.C. § 3512.

c. Federal Financial Management Improvement Act (FFMIA) of 1996, Public Law 104-208 31, U.S.C. § 3512.

d. The Budget and Accounting Procedures Act of 1950, 31 U.S.C. § 112, 1531, 3511-3512, 3524.

e. Office of Federal Financial Management Core Financial System Requirements, (OFFM-NO-0106) January 2006.

f. OMB Circular No. A -11, Preparation, Submission and Execution of the Budget.

g. OMB Circular No. A -123, Management's Responsibility for Internal Control.

h. OMB Circular No. A-127, Financial Management Systems.

i. OMB Circular No. A -130, Management of Federal Information Resources. Prescribes policies for the management of information resources systems.

j. OMB Circular No A -134, Financial Accounting Principals and Standards

k. OMB Circular A -136, Financial Reporting Requirements

l. Federal Accounting Standards Advisory Board (FASAB).

m. NASA Policy Directive (NPD) 9010.2, "Financial Management"

P.4 Applicable Documents

a. NPD 2830.1, "NASA Enterprise Architecture."

b. NPR 9010.3, "Financial Management Internal Control"

P.5 Measurement/Verification

Quality assurance reviews and analysis of financial and budgetary reports and data submitted through the continuous monitoring program will be used to measure compliance with this NPR.

P.6 Cancellation

None.

/S/
Terry Bowie
NASA Deputy Chief Financial Officer

Chapter 1. General

1.1 Overview

1.1.1 This NPR establishes policy for the development, operation, evaluation, and reporting of all agency financial systems. The National Aeronautics and Space Administration (NASA) programmatic and institutional communities rely on financial management systems for support with budgeting, financial accounting, cash and cost management, and financial reporting activities. NASA follows the guidance defined in the Office of Management and Budget (OMB), Office of Federal Financial Management Core Financial Systems Requirements which are designed to guide agencies' compliance with a myriad of other laws and regulations affecting the design and operation of Federal Financial Management Systems. This NPR consists of the following chapters:

a. Chapter 1. General Overview

b. Chapter 2. Integrated Financial Management Systems

c. Chapter 3. Financial Information

d. Chapter 4. System Development and Change Management

1.2 Agency Requirements

1.2.1 The primary goals and objectives for NASA financial systems are to support the Office of the Chief Financial Officer (OCFO) and NASA for:

a. Complete, reliable, consistent, and timely information prepared uniformly and responsive to the financial information needs of NASA management.

b. Development and reporting of financial information.

c. Integration of accounting and budgeting data.

d. Systematic measurement of performance.

e. Effective financial management tools to support NASA's mission.

f. Accurate transaction processing and reporting.

g. System controls to prevent overspending.

h. Financial integrity, risk mitigation, and cost control.

i. Operations reports supporting measurement against financial standards.

1.2.2 NASA financial management systems will integrate functional systems into information technology architecture. This means that financial management systems will:

a. Share common data through NASA Structure Management (NSM).

b. Perform financial functions and automatically exchange data with other systems.

c. Promote control of resources, information quality, and performance review through uniformity of features and internal system controls providing validation of data throughout the system components.

1.2.3 Implementations, and changes to existing financial management systems must be coordinated through the NASA Integrated Enterprise Management Program (IEMP).

1.2.4 The IEMP establishes a single Agency-wide integrated financial management business solution comprising multiple components that all share a common data infrastructure, provide seamless integration, Agency-wide fiscal management capabilities, and readily available data and information for OCFO and operational managers.

1.2.5 NASA integrates financial information processed in subsidiary or feeder systems with its core accounting system to enable accurate and complete postings to the United States Standard General Ledger. Primary systems include those listed on the IEMP web site as either in operation or under development.

1.3 Roles And Responsibilities

1.3.1 Chief Financial Officer (CFO). OMB and Congress chartered the CFO with broad responsibilities for financial systems, making the CFO the key decision maker for managing and implementing changes to these systems. The NASA CFO is responsible to:

a. Ensure the planning, design, implementation, operation, evaluation, and reporting of financial systems are performed in accordance with FMFIA requirements, the Chief Financial Officers Act of 1990, OMB Circular No. A-127, and other associated OMB directives and legislative pronouncements.

b. Define requirements for, and maintain an integrated financial management system that complies with the requirements of 31 U.S.C. 902 (a) (3).

c. Serve as the senior Agency official responsible for coordinating the overall NASA effort for assessing, improving, and reporting of financial systems in accordance with OMB Circular No. A-127, Section 4 of the FMFIA (31 U.S.C. 3512(d)), and other associated OMB directives.

d. Review and approve the design requirements for the development and enhancement of NASA financial systems; monitor and evaluate the implementation of these systems; and determine the degree of conformance with the principles, standards, and related requirements prescribed by the Comptroller General of the United States, and OMB Circular No. A-34, Financial Accounting Principles and Standards.

e. Function as the business process owner and decision maker for NASA financial systems.

f. Work collaboratively with the CIO and the Integrated Enterprise Management Program Director to manage NASA financial system implementation, changes and use.

1.3.2 Chief Information Officer (CIO). The CIO's focus is primarily with the technical aspects of NASA financial systems. OMB and Congress chartered the CIO to provide the leadership, vision, communication, coordination, and innovation necessary to maximize government effectiveness in using information technology. The NASA CIO is the key decision maker for technical judgments concerning financial systems and is responsible to:

a. Ensure the Agency's information resource management strategy for financial information systems is in alignment with the Agency CFO's mission, vision, and strategic goals.

b. Provide sound standards and policies, such as, enterprise architecture and security for financial systems.

c. Ensure strategies align with management practices for developing and operating financial systems.

d. Maintain information security for financial systems.

e. Construct and enforce sound enterprise architecture standards for financial systems.

f. Employ effective financial information system management practices.

g. Ensure effective Agency financial information system investment management practices.

h. Work collaboratively with the CFO, and IEMP to manage NASA financial system implementation, changes and use.

i. Maintain and publish an Agency-wide system inventory and a description of each system including its purpose and points of contact.

1.3.3 Integrated Enterprise Management Program Director. The IEMP Program Director reports to the CIO. The IEMP mission is to improve the financial, physical, and human resources management systems and processes throughout the Agency. To re-engineer NASA's business infrastructure using industry "best practices" and implement supporting technology to provide the management information needed to support the Agency's strategic implementation plans, IEMP provides the following support:

a. Design, implement, and operate financial systems in compliance with the Agency's financial management requirements, as defined in the NASA NPRs.

b. Ensure Agency requirements for financial system designs have been approved through the CFO governance process before proceeding with the development and modification of a financial system.

c. Ensure timely corrective action is taken regarding instances of nonconformance to IEMP policy.

d. Perform assignments and functions found in the Service Level Agreement between IEMP Competency Center and the OCFO.

1.3.4 IEMP Competency Center (IEMPCC). The IEMPCC is responsible for managing operations for the CIO that support business systems and processes to improve NASA's fiscal and management accountability. The IEMPCC supports the technology and business process needs of the Agency through the integration of information technology and business process support professionals.

1.3.5 Office of Policy and Business Integration Director (OPBI). The OPBI Director is responsible to:

a. Develop and issue NASA financial management system policy to provide guidance to headquarters and center personnel.

b. Recommend assignments and functions for OCFO and IEMPCC, which are defined in a Service Level Agreement between the two entities.

1.3.6 Agency Business Process Lead. The Agency Business Process Lead is responsible to:

a. Develop Agency standards for Financial Business Processes by coordinating the development of associated policies and procedures.

b. Act as an application functional support expert for business process improvements and serve as a primary interface to the IEMPCC Functional Support Lead and the IEMPCC.

c. Assist management officials to ensure all defined roles are staffed.

d. Represent the OCFO and Center Business Process Leads(s) concerning input to changes to Agency business processes.

e. Evaluate and submit Agency-initiated Change Requests.

f. Coordinate maintenance of Agency-level master data.

g. Engage multiple user constituencies (e.g., finance, budget, funds distribution, procurement, and Project Offices) to ensure issues with a business process are identified and resolved.

h. Coordinate testing and acceptance of specified system changes.

i. Coordinate complex business process changes.

1.3.7 Agency Reporting Lead. The Agency Reporting Lead is responsible to:

a. Develop agency standards for financial reporting by coordinating the development of associated policies and procedures.

b. Work with the Center Reporting Leads, Business Warehouse Reporting Leads, and IEMPCC as the focal point for Agency-level reporting.

c. Work to develop specific report requirements to meet agency internal and external reporting requirements. Translate requirements and ensure timely delivery of reports.

1.3.8 Center Chief Financial Officer. The Center Chief Financial Officer is responsible to:

a. Ensure Center user controls over financial systems are implemented.

b. Monitor organizations outside of the Agency that process transactions on behalf of the Center to ensure accuracy and completeness of financial data.

c. Make assignments for center operation support for financial systems. The assignments and functions are found in the current Service Level Agreements between IEMP Competency Center and the OCFO.

1.3.9 NASA Shared Services Center (NSSC) Chief Financial Officer. The NSSC Chief Financial Officer has the same responsibilities as the Center CFO.

Chapter 2. Integrated Financial Management Systems

2.1 Overview

2.1.1 Financial systems management requires a joint effort of the NASA Chief Financial Officer (CFO), Chief Information Officer (CIO), and the Integrated Enterprise Management Program (IEMP). The CIO's focus is on managing the technology aspects of financial systems to meet the needs of end users. The CFO is focused on assuring financial systems perform as a useful tool to conduct financial business processes, report financial information, and maintain data integrity. The Chief Financial Officer Act (see Authority and References) extends Agency CFO's responsibility to all financial management aspects for operating Agency programs. For this reason, the NASA CFO is the key decision maker in "Agency-wide and Agency component accounting, financial and asset management systems." This chapter defines the roles and responsibilities of key individuals within NASA, who are responsible for implementing the concepts outlined in the Federal Financial Management System Requirements (FFMSR). The FFMSR describes the basic elements of a model for integrated financial systems in the Federal government, how these elements should relate to each other, and specific considerations in developing and implementing integrated financial systems. The FFMSR was developed by the General Services Administration (GSA) Financial Systems Integration Office (FSIO). All financial management systems must deliver the following:

a. Demonstrate compliance with accounting standards and requirements.

b. Provide timely, reliable, and complete financial management information for decision making at all levels of government.

c. Meet downstream information and reporting requirements with transaction processing data linked to transaction engines.

d. Accept standard information integration and electronic data to and from other internal, governmentwide, or private-sector processing environments.

e. Provide for "one-time" data entry and reuse of transaction data to support downstream integration, interfacing, or business and reporting requirements.

f. Build security, internal controls, and accountability into processes and provide an audit trail.

g. Be modular in design and built with reusability as an objective.

h. Meet the needs for greater transparency and ready sharing of information.

i. Scale to meet internal and external operational, reporting, and information requirements for both small and large entities.

2.2 Agency Requirements

2.2.1 NASA is responsible for implementing the Financial Systems concepts outlined in the FFMSR.

2.2.1.1 Linking Program Delivery with Financial Management. Congress authorizes programs and funding for agencies to carry out specific purposes. Program delivery results in financial events such

as acquisitions, grants, loans, payment of benefits, and payroll, which become the basis for financial transactions that must be captured and recorded through standard business processes. Government program financial events must be in accordance with their intended purposes and align with recording standards. Financial transaction processing provides accounting and control and is the basis for collecting and organizing financial data. The data collected from financial events is the basis for ensuring accountability and provides information in financial report format for decision makers. Evaluation of data processing reports checks recorded results against program purposes.

2.2.1.2 Automated systems - NASA's main financial business processing tools. These systems supply the business links between NASA and other government and commercial organizations through electronic data exchange, reporting, collections and disbursements. Automated systems control activity and use data to form understandable information and reports. Use of common financial data from disparate programs, processes, and systems occurs for different purposes by different systems through system processing. Financial systems must ensure data in systems and system processing accurately maintains the financial transactions of NASA. The NASA financial business system of record is the SAP Core Financial System.

2.2.2 Quality performance of financial business processes, financial information integrity, and data integrity are the ultimate goals of NASA financial systems. NASA policies ensure NASA systems perform at an effective and efficient level.

2.2.3 Framework for Financial Information Systems Integrity. To achieve the Agency's goals for financial systems, NASA shall adhere to the guidance as set forth in the FFMSR through its Office of the Chief Financial Officer (OCFO) Governance Process, and IEMP.

2.2.4 Basic Financial System Requirements. NASA management must establish and maintain financial systems that are compatible with all NASA systems and governmentwide financial systems. This requires NASA's systems, whether owned and operated by NASA or provided by cross servicers, to incorporate standard financial and standard data exchange formats. This sub section contains requirements for internal and external systems to help ensure adequate program delivery. NASA systems shall:

a. Collect accurate, timely, complete, reliable, and consistent information.

b. Provide for adequate Agency management reporting.

c. Support government-wide and Agency level policy decisions.

d. Support the preparation and execution of Agency budgets.

e. Facilitate the preparation of financial statements, and other financial reports in accordance with Federal accounting and reporting standards.

f. Provide information to central agencies for budgeting, analysis, and governmentwide reporting, including consolidated financial statements.

g. Provide a complete audit trail to facilitate audits.

h. Use integrated standard data classifications (definitions and formats) established for recording financial events.

i. Provide common processes used for processing similar kinds of transactions.

j. Abide by internal controls over data entry, transaction processing, and reporting.

k. Be designed to eliminate unnecessary duplication of transaction entry.

l. Provide for ad hoc inquiries.

m. Provide on-line instructions which are consistent with NASA policies and Federal regulations and authorities.

n. Provide for business warehousing of data and transactions.

o. Integrate common data from multiple services across the enterprise.

p. Maintain functions needed for NASA business purposes.

q. Satisfy requirements. Government Accountability Office (GAO) Checklist GAO-05-225G - Core Financial System Requirements Checklist. This checklist reflects FFMSR requirements for Core Financial Systems compliance review of Agency core systems and is designed to determine if the systems substantially comply with FFMSR.

2.2.5 Performance Goals of Financial Management Systems. NASA financial systems shall comply with the FFMSR identified performance goals applicable for all financial management systems as listed below:

a. Demonstrate compliance with accounting standards and requirements.

b. Provide timely, reliable, and complete financial management information for decision making at all levels of government.

c. Meet future information and reporting requirements with transaction processing data linked to transaction engines.

d. Accept and provide standard financial information electronically from and to other internal, government-wide, or private-sector processing environments.

e. Provide for "one-time" data entry and reuse of transaction data to support downstream integration, interfacing, or business and reporting requirements.

f. Build security, internal controls, and accountability into processes and provide an audit trail.

g. Be modular in design and built with reusability as an objective.

h. Meet the needs for greater transparency and the ability to share information in a timely manner.

i. Meet internal and external operational, reporting, and information requirements for NASA.

j. Incorporate internal controls in accordance with NASA NPR 9010.3, Financial Management Internal Control.

2.2.6 NASA Financial Management Business Process. NASA's policy is to maintain one centralized integrated financial management system that aligns with Agency financial business processes for which the CFO is the key business process owner. NASA's financial business processes are defined by the OCFO in accordance with the FFMSR, and are approved through the CFO Governance Process. If gaps are identified in the functionality provided by the central financial system, the OCFO may choose to establish additional systems to address these specific process needs. To reduce the risk that these subsystems may lead to inconsistent views of financial information, they must be designed so as not to house redundant financial data or call into question the authoritative source of any financial data. This section identifies the criteria for determining financial systems for which the NASA CFO is the business process owner.

2.2.7 CFO as Business Process Owner. The CFO is the key business process owner for the Core

Financial System functions and elements of any system, subsystem, feeder system, or system routine that supports a NASA financial business process. Such systems include any that:

a. Support the direct business processes of the CFO.

b. Perform ancillary calculations, functions, tracking or other activities primarily for or related to the business processes of the CFO.

c. Perform functions to process data from other systems into financial systems performing the business processes of the CFO. This includes:

(1) Interfaces that extract data from an existing system.

(2) Process data within mixed system or interfaces that pertain to the CFO business process.

d. Provide information or data for the use of systems performing CFO business processes, such as, an edit table look up. The CFO is the key business owner and decision maker for mixed system processing that pertains to a CFO business process.

e. Process data from financial systems to use in other systems, reports, or to support other CFO business functions/business processes, including processes A through D above. NASA is committed to maintaining and using standard financial data that is reconcilable to an official system of record. Ensuring the integrity of data critical to management decision making--such as detailed and summary level financial management data--requires an Agency commitment to maintain one centralized data source. Replication of centrally managed data to other systems will be strictly limited to curtail manipulation of the data and the propagation of multiple, conflicting versions of the information. All requests for extracting financial data from the Core Financial System or the Business Warehouse for the purpose of loading the data into another system must be approved by the OCFO.

f. The CFO is the key business owner and decision maker for any extraction interface used to obtain data from CFO business process systems, including:

(1) Interfaces that extract data.

(2) Processing routines within mixed systems or interfaces that extract data.

2.2.8 CFO Financial Management Business Processes. Whether the system performs a CFO business process determines if the CFO is the key decision maker for a system. The NASA CFO is responsible for:

a. Budget and Finance. The President and Congress require CFOs to manage the Federal budget process. The FFMSR uses the term "budget" to refer to planning and budget formulation, and "finance" to refer to budget execution. The NASA CFO responsibilities include managing activities that involve formulating and executing the Agency budget as prescribed by legislation and Presidential policies.

b. Accounting. Accounting requires complex data classification and systems processing to keep the books, prepare financial statements and reports, and perform business functions. Accounting is fundamental to public fund stewardship and forms the basis for program performance measurement and information reporting. Accounting requires a complex system process involving many systems.

c. Collections and Receivables. Managing collections is a CFO accounting and control function to ensure standard transaction processing for collecting funds into the Treasury and NASA accounts in accordance with laws and applicable accounting standards. It encompasses the stewardship, governance, and infrastructure to support the constitutionally mandated function for collecting

money to finance government into the Treasury through taxes, fines, fees, forfeitures, and donations. Funds are also collected through the sale of property, user fees, leases, royalties, etc., that result from government operations.

d. Payments. Payments are the disbursement of NASA funds through a variety of means to many different individuals and organizations to pay for goods and services or to distribute entitlements, benefits, grants, subsidies, loans, or claims. The NASA CFO is responsible to ensure control over NASA funds through standard transaction processing required by Treasury for disbursing funds.

e. Assets and liabilities. The CFO, in coordination with the Institutions and Management Mission Support Office, is responsible to ensure proper accounting and stewardship for assets and liabilities through accurate reporting.

f. Reporting and Information. The CFO is responsible for the integration of cash, accrual and cost accounting and reporting for internal performance management and external reporting; and, the integrity of financial reporting and information. Business processes, information flows, and data architecture must be brought together to meet information processing goals. This requires a collaborative effort between the OCFO, financial managers, program managers, and OCIO.

2.2.9 Integrated Financial Management Systems Architecture. NASA's policy is to develop and maintain a form of enterprise architecture for financial systems using the modular approach composed of an integral central core financial system and integration of subsystems, feeder systems, and related system processing necessary to satisfy FFMSR and FSIO requirements. This sub section identifies the form NASA financial systems must take. NASA systems shall uphold the requirements for integration cited in the FFMSR, including:

a. Abiding by a financial systems architecture design with modules that work together and with governmentwide systems so transactions are recorded consistently when and where needed. The following are effective design characteristics:

(1) Common Data Elements. NASA systems require use of standard data classification which requires:

(a) Developing standard definitions and formats for data recordation.

(b) Capturing, sharing and storing common data elements recorded through financial system processing events among systems for meeting reporting requirements and use in subsequent processing.

(c) Abiding by governmentwide information standards including the US Government Standard General Ledger and Treasury reporting requirements.

b. Common Transaction Processing. NASA systems shall use common processing techniques among systems for similar transactions. Such consistency streamlines subsequent processing efforts.

c. Consistent Internal Controls. NASA systems shall use internal controls for data entry, transaction processing, and reporting to ensure the integrity of data, information, and the protection of NASA resources.

d. Efficient Transaction Entry. The design of financial management systems shall accommodate single entry points across systems to eliminate duplicate data entry.

e. Integration. Integration refers to a system design which permits multiple points for users and other systems to access information. However, it does not mean that all information is physically located in the same database. Interfaces provide integration by allowing one system to share data with another system. NASA shall incorporate provisions to integrate systems during data processing as

long as it does not disrupt normal business processes and is cost effective. Any decision concerning the integration of data into or out of the NASA financial systems will follow the governance process established by the OCFO and the IEMP Program Office. This governance process ensures the use of:

(1) A common integration framework.

(2) Standard integration patterns to protect data integrity.

(3) Established decision trees to ascertain the most efficient and reliable means of integration.

f. The NASA CIO is the key decision maker for the technical aspects for financial systems within the framework of governmentwide and NASA CFO requirements, which includes decisions about system configuration, processing data through one centralized system or many systems, processing routines, and data organization.

g. The FFMSR integration criterion applies to all NASA systems, which includes in-house financial systems, outsourced financial business functions that are processed through a service provider system, and for the acceptance of new or changes to existing systems in the NASA architecture.

2.3 Roles and Responsibilities

2.3.1 Chief Financial Officer (CFO). OMB and Congress chartered the CFO with broad responsibilities for financial systems, making the CFO the key decision maker for managing and implementing changes to these systems. See Chapter 1.

2.3.2 Chief Information Officer (CIO). The CIO's focus is primarily with the technical aspects of NASA financial systems. OMB and Congress chartered the CIO to provide the leadership, vision, communication, coordination, and innovation necessary to maximize government effectiveness in using information technology. The NASA CIO is the key decision maker for technical judgments concerning financial systems. The CIO implements systems development and systems maintenance and support initiatives through the IEMP CC which coordinates with systems owners and user in the OCFO organization and NASA users in Centers and Headquarters. See Chapter 1.

Chapter 3. Financial Information

3.1 Overview

3.1.1 NASA's policy is to abide by the Federal Financial Management System Requirements (FFMSR's) guidance for the five financial system management functions of:

a. Accounting Classification Management

b. Document and Transaction Control

c. Document Referencing and Modification

d. System-Generated Transactions

e. Audit Trails

3.1.2 Formulation of the NASA Financial Classification Structure (FCS) is of great concern to the NASA Chief Financial Officer (CFO) because it determines the basic accounting codes of the Agency. This chapter documents policies and procedures for NASA formulation of a Financial Classification Structure (FCS). The NASA FCS includes all financial related codes used in NASA financial systems.

3.2 Agency Requirements

3.2.1 NASA shall have one uniform FCS for recording transactions into systems supporting the CFO business processes.

3.2.2 All FCS codes require written formal approval by the Office of the Chief Financial Oficer (OCFO) prior to use.

3.2.3 Any NASA system with the need to conduct business processing using data elements common to the FCS shall use the same coding as the FCS.

3.2.4 The OCFO shall issue notification of and publish on the OCFO website a record of the FCS including updates and changes to inform Centers and others in the financial community of permissible and current financial codes.

3.2.5 NASA codes shall be formulated to abide by the FFMSR polices and direction.

3.2.6 The FCS must support the following accounting classification elements:

a. Treasury Account Symbol (TAS)

b. Budget fiscal year

c. Internal fund code

d. NASA Organization Code

e. NASA Program Code

f. NASA Project Code

g. Activity

h. Cost center

i. Object class

j. Revenue source

k. Budget function

l. Budget sub-function code

m. Accounting period

n. Any additional accounting classifications or other financial classification codes necessary for NASA's transactions.

3.2.7 The FCS shall be sufficient in detail to support the following functions and requirements:

a. Core financial system activities and components:

(1) Accounting activity query.

(2) System for corrections, adjustments, and transfers, which provides an externally accepted audit trail.

(3) Revenue source code structure.

(4) Fund structure.

(5) TAS. The TAS characteristics include:

(a) Fund type.

(b) Budget status.

(c) Funding source.

(d) Period of availability.

(6) Internal fund code structure. The FCS shall maintain an accounting classification structure that can associate programs, projects, and activities with multiple internal fund codes included in the NASA Structure Management (NSM).

(7) Mission, Theme, Program and Project code structure. FCS shall maintain a structure that can associate Mission, Theme, Programs, and Projects with financial and technical work breakdown structures. The FCS shall maintain a program code structure with the level of detail sufficient to report multiple categories for budget formulation and execution decisions. Current codes for execution and formulation can be found at https://nsminfo.nasa.gov/nsminfo/home/home.aspx. These are located behind a firewall and can only be accessed inside the NASA network.

(8) Object class code structure. FCS shall maintain an object class structure consistent with the standard object class codes defined in Office of Management and Budget (OMB) Circular No. A -11. FCS shall accommodate additional (lower) levels in the object class structure, e.g., by establishing parent/child relationships.

(9) Function Codes. This 6-digit code is used in the Core Financial System to identify those infrastructure activities that support NASA's programs and projects.

b. NASA Structure Management (NSM), a single, integrated Programmatic and Institutional data management structure that: supports the financial cycle from budget formulation through execution; supports performance tracking; enables better decision-making; improves management effectiveness; provides one structure and one system. NSM is the data Management Structure used to manage all NASA resources, both Programmatic and Institutional, and to better facilitate cost management and operations. NSM's single integrated structure and metadata attributes linked with other technical and budget execution elements, is designed to improve the Agency's ability to conduct financial analysis, cost-estimating and execute financial transactions such as funds distribution and cost collection. The NSM and its metadata attributes also assist the Office of the Chief Engineer (OCE) in determining the appropriate management requirements for programs and projects. NSM enhances project management in constructing a Work Breakdown Structure matching Financial and Technical structures. Meta Data Manager (MdM) is the system used to track changes to the NSM.

c. Coding for any other process consistent with the capabilities of NASA financial management systems.

3.2.8 Change management of FCS Codes. NASA shall use a systemic, organized, and formal process to manage changes, additions, and deletions to the FCS through a collaborative effort of the OCFO, IEMP, and OCE.

3.2.8.1 The OCFO shall recommend changes based on the need for revisions, additions, and deletions due to the financial business process needs of NASA. The FCS must support OCFO business needs.

3.2.8.2 The OCIO decisions govern the technological structure of the changes. OCIO shall:

d. Approve changes recommended by the OCFO considering the feasibility of the change for incorporation into the system.

e. Work collaboratively with the OCFO to consider approval of changes brought about by technological considerations such as; new technology, new requirements, and the need to improve performance.

3.2.9 Responsive Updates. NASA management must be responsive to new scientific breakthroughs and fresh approaches to complex problems. Actions by OMB, Congress, Treasury, and others require change, additions, elimination or merger of NASA programs, projects, or activities. NASA FCS must be sufficiently flexible in design to accommodate these changes by:

a. Providing a structure permitting the addition of new codes easily without redesign.

b. Meeting the need for changing, adding, deleting, eliminating or merging codes by:

(1) Minimizing the need for transaction recoding.

(2) Preserving the audit trail for FCS changes.

(3) Incorporating financial data from obsolete codes into new codes.

(4) Accommodating changes, additions, eliminations or merger of data in areas most vulnerable to change with ease.

(5) Identifying electronic mechanisms and analytical techniques that can be used to accomplish FCS maintenance.

3.2.10 Routine FCS Change Management. Routine change management aligns closely with the

annual operating cycle of NASA. A less formal process than for more complex changes is necessary to provide quick implementation for on-going operations.

3.3 Roles and Responsibilities

3.3.1 Chief Financial Officer (CFO). OMB and Congress chartered the CFO with broad responsibilities for financial systems, making the CFO the key decision maker for managing and implementing changes to these systems. See Chapter 1.

3.3.2 Chief Information Officer (CIO). The CIO's focus is primarily with the technical aspects of NASA financial systems. OMB and Congress chartered the CIO to provide the leadership, vision, communication, coordination, and innovation necessary to maximize government effectiveness in using information technology. The NASA CIO is the key decision maker for technical judgments concerning financial systems. The CIO implements systems development and systems maintenance and support initiatives through the IEMP CC which coordinates with systems owners and user in the OCFO organization and NASA users in Centers and Headquarters. See Chapter 1.

Chapter 4. System Development And Change Management

4.1 Overview

4.1.1 This chapter sets forth NASA policy to jointly manage system development and changes through a formal collaborative effort of the Chief Financial Officer (CFO), Chief Information Officer (CIO), and Integrated Enterprise Management Program (IEMP). Business processes change and need improvement requiring new development and changes to existing system architecture, technology, and processes. Communication and partnership between the CFO, CIO, and IEMP in planning for new systems, upgrades, and changes is critical to assure business goals are met by software and technology performance. The CFO and IEMP must bring changing business requirements into the planning process so the CIO will know to integrate financial management requirements into overall enterprise architecture planning.

4.2 Agency Requirements

4.2.1 The addition of new or proposed changes to existing NASA CFO policies, processes, operations, and systems must be approved in accordance with CFO Governance. The CFO Governance Structure is defined as follows:

a. Financial Executive Round Table

b. Financial Steering Group

c. Financial Process Teams

4.2.2 The Financial Executive Round Table is responsible to review and approve the addition of new or proposed changes to existing CFO policy, processes, and systems/requirements.

4.2.3 The Financial Steering Group is responsible to develop/concur on recommendations to be presented to the Financial Executive Round Table for approval, and to support the CFO with the implementation of approved actions/decisions made by the Financial Executive Round Table. If the course of action has systems implications, then the Financial Steering Group should coordinate with IEMP to ensure the development of requirements are consistent with CIO standards.

4.2.4 Financial Process Teams are responsible to coordinate with the Financial Steering Group for the development of new or proposed changes to CFO policy, processes, and systems/requirements efforts. The Financial Process Teams consists of financial subject matter experts (SMEs) from across the Agency.

4.2.5 The IEMP Competency Center exists to deliver an integrated customer support function that consolidates the majority of the application support elements for NASA.

4.2.6 Service Level Agreement (SLA) formally quantifies consistent performance expectations associated with the use of the delivered Core Financial application. It is an agreement between the IEMP CC and the Financial Steering Committee, acting as a proxy for the NASA user community. It defines the roles and responsibilities performed by the IEMP CC, Center, and Agency organizations as well as service level commitments and associated performance standards and definitions.

4.2.7 All financial system change requests, which are approved via the IEMP, but do not require CFO approval, are screened by the Office of the Chief Financial Officer (OCFO) to ensure that changes needing CFO concurrence are presented to the CFO for concurrence.

4.2.8 Within the OCFO, the Business Integration, Financial Management, Quality Assurance and Budget Divisions are the primary users and stakeholders of the Core Financial system. The Business Integration Division, Systems Integration Branch is responsible for managing changes that have cleared the governance process. Business Integration is accountable for ensuring that service requests are reviewed and implemented in a way that meets federal policy requirements and is in line with NASA's financial and operational goals.

4.2.9 The NASA CIO has the responsibility for ensuring that NASA's information assets are acquired and managed consistent with federal policies, procedures, and legislation. The Office of the Chief Information Officer's (OCIO) primary office for implementing changes to Core Financial is the IEMP.

4.2.10 Fiscal Year-End Close Testing and System Integration Testing is used to ensure that the NASA Core Financial system, Contract Management Module (CMM), and other related systems operate in accordance with the process design specifications for all business functions. This test covers business processes, system functions (standard and custom), application security, and user procedures & job aides. The test also helps to ensure that these aspects work together as an integrated whole. Competency Center is responsible to perform System Integration Testing (SIT 1, SIT 2 and SIT 3) in conjunction with OCFO headquarters and Centers. Test Scripts are developed and utilized by responsible parties to conduct SIT 1, SIT 2 and SIT 3 testing. Testing and Test results are validated and approved by assigned Point of Contacts (POCs) and Approvers in OCFO HQ and Centers.

4.2.11 Testing must include the points of integration between the system applications supporting Core Financial business functions.

a. Interfaces between SAP and CMM system

b. Interfaces between SAP and Metadata Management (MdM) system

c. Interfaces between SAP and Bankcard system

d. Interface between CMM and Federal Procurement Data System - Next Generation (FPDS-NG)

e. Interfaces between SAP and Travel Manager

f. Interfaces between SAP and Fed Traveler

g. Interfaces between Fed Traveler and NASA Account Management System (NAMS)

h. Interfaces between NAMS and NASA Property Disposal (N-Prop)

i. Interfaces between SAP and Agency and Center application systems (e.g., NASA Supply Management System (NSMS), Advanced Materials Management System (AMMS), Contractor Held Asset Tracking System (CHATS))

j. Interfaces between SAP and third-party/external entities (e.g., Treasury, General Services Administration (GSA), Department of Interior)

(1) At a minimum, execution through the EAI integration tool

(2) Through to the third-party wherever this business partner or third-party entity has such test

support capabilities

4.3 Roles and Responsibilities

4.3.1 Chief Financial Officer (CFO). Office of Management and Budget (OMB) and Congress chartered the CFO with broad responsibilities for financial systems, making the CFO the key decision maker for managing and implementing changes to these systems. See Chapter 1.

4.3.2 Chief Information Officer (CIO). The CIO's focus is primarily with the technical aspects of NASA financial systems. OMB and Congress chartered the CIO to provide the leadership, vision, communication, coordination, and innovation necessary to maximize government effectiveness in using information technology. The NASA CIO is the key decision maker for technical judgments concerning financial systems. The CIO implements systems development and systems maintenance and support initiatives through the IEMP CC which coordinates with systems owners and user in the OCFO organization and NASA users in Centers and Headquarters. See Chapter 1.

Appendix A. Definitions

A.1 **Business Function**. A business function is the purpose which the business or a component of an organization is created to perform.

A.2 **Business Process**. A business process is a collection of activities that takes one or more types of input and creates an output that is of value to the customer.

A.3 B**usiness Process Owner**. The business process owner is responsible for conducting the business that a financial management system supports. A key business process owner understands, in detail, activities, stakeholder requirements, performance needs, work requirements, and other business processes related to a business function for which they are responsible. A business process owner is a decision maker for the use and management of a system, which supports a business function for which they are responsible.

A.4 **Business Warehouse**. The Business Warehouse is a web-based reporting tool that enables Agency-wide data analysis from the Agency core financial system and other business applications.

A.5 **Core Financial System**. This system forms the backbone for NASA's integrated financial management system. It provides common processing routines, supports common data for critical financial management functions affecting NASA, and maintains the required financial data integrity control over financial transactions, resource balances, and other financial systems. The core financial system supports general ledger management, funds management, payment management, receipt management, and cost management. The system receives data from other financial systems and from direct user input and it provides data for financial performance measurement and analysis and for financial statement preparation. Core Financial provides NASA's OCFO with a comprehensive enterprise resource planning (ERP) and financial management system. Core Financial is used to provide a centralized accounting and budgeting structure for transaction entries, reporting, and decision making. The core financial system functions include:

a. General Ledger Management is the central function of the core financial system. The general ledger is the highest level of summarization and must maintain account balances by the accounting classification elements established in the core financial system management function. It systematizes the accounting business function for the CFO.

b. Funds Management is the function to ensure that NASA does not obligate or disburse funds in excess of those appropriated, apportioned or allotted. It systematizes the budget execution business function for the CFO.

c. Payment Management is the function that provides appropriate control over all payments made by or on behalf of NASA.

d. Receivable Management is the function that supports activities for recognizing and recording debts due to NASA or other components of the government, performing follow-up actions to collect on these debts, and recording cash receipts.

e. Cost Management is the function that measures the total cost and revenue of NASA programs and their various elements, activities, and outputs.

f. Reporting provides financial information for many uses. NASA uses financial reports to help manage programs, prepare and monitor budgets, provide a basis for decision making, and meet requirements for internal and external reporting requirements.

g. Systems Management ensures that the capabilities exist to capture, classify, process, and report the financial activity of Federal agencies. NASA financial systems architecture must comply with the Federal Financial Management Systems Requirements.

A.6 **Feeder System**. A feeder system is an independent information system that transmits data to another system via an interface.

A.7 **Financial Management System**. Financial Systems and the financial portions of mixed systems necessary to support financial management, including manual or automated processes, procedures, controls, hardware, software and support personnel. Financial systems include an information system, consisting of one or more applications, that is used for (A) collecting, processing, maintaining, transmitting or reporting data about financial events; (B) supporting financial or budgeting activities; (C) accumulating and reporting cost information, or (D) supporting the preparation of financial statements.

A.8 **Financial System**. A system that supports the financial functions required to track financial events, provide financial information significant to the financial management of the Agency, or is utilized for the preparation of financial statements.

A.9 **Information System**. As defined by OMB No. A-127, the organized collection, processing, transmission, and dissemination of information in accordance with defined procedures, whether automated or manual. Information systems include non-financial, financial, and mixed systems.

A.10 **Integrated System**. A system in which separate programs perform separate functions with communication and data-passing between functional programs performing standardized I/O routines and a common data-base. Such systems allow flexibility in addition/revision/deletion of various processing functions without disrupting the entire system.

A.11 **Mixed System**. A system that contain both non-financial and financial data.

Appendix B. Authorities And Related Documents

B.1 Authority

a. **Chief Financial Officers (CFO) Act of 1990, Public Law 101-576, 31 U.S.C. § 902**. Mandates agency CFO responsibilities for financial management systems.

b. **Federal Managers' Financial Integrity Act (FMFIA) of 1982, Public Law 97-255, 31 U.S.C. § 3512**. Amends the Accounting and Auditing Act of 1950 requiring ongoing evaluations and reports of the adequacy of the systems of internal accounting and administrative controls for Federal agencies to safeguard against waste, misuse of Agency funds and property.

c. **Federal Financial Management Improvement Act (FFMIA) of 1996, Public Law 104-208 31, U.S.C. § 3512** Section 803 of the Act requires that agencies substantially comply with Federal financial systems requirements, applicable Federal accounting standards, and the United States Government Standard General Ledger at the transaction level.

d. **The Budget and Accounting Procedures Act of 1950, 31 U.S.C. § 112, 1531, 3511-3512, 3524**. Requires all agencies to report and maintain standard accounting systems on fiscal, budget, and program information. The Act also provided the groundwork for establishing the Joint Financial Management Improvement Program (JFMIP). JFMIP, now known as the Financial Systems Integration Office (FSIO), publishes requirements for financial systems.

e. **Office of Federal Financial Management Core Financial System Requirements, (OFFM-NO-0106) January 2006**. Part of the Federal Financial Management Systems Requirements document series. This document addresses the joint goals of the Chief Financial Officers Council, and the OMB to improve the efficiency and quality of financial management in the Federal Government.

f. O**MB Circular No. A -11, *Preparation, Submission and Execution of the Budget***. Prescribes the reporting requirements for the management of information resource systems.

g. **OMB Circular No. A -123, *Management's Responsibility for Internal Control***. In conjunction with OMB Circulars No. A -127 and No. A -130, Circular No. A -123 prescribes management responsibility for internal controls including those for information systems.

h. **OMB Circular No. A-127, *Financial Management Systems***. Prescribes policies and standards for executive departments and agencies to follow in developing, operating, evaluating, and reporting on financial systems. The Financial Systems Integration Office (FSIO) within the General Services Administration publishes financial management systems concepts, framework, and requirements. OMB incorporates FSIO's systems concepts and requirements by reference in Circular No. A-127, thereby making the concepts and requirements applicable to Federal agencies. FSIO defines mandatory requirements as follows: "The mandatory requirements describe what the system must do and consist of the minimum acceptable functionality necessary to establish a system or are based on Federal laws and regulations. Mandatory requirements are those against which agency heads evaluate their systems to determine substantial compliance with system requirements under the FFMIA. These requirements apply to existing systems in operations and new systems planned or under development." FSIO defines value-added requirements as follows: "The value-added requirements describe features or characteristics and may consist of any combination of the

following: (1) using state-of-the-art technology, (2) employing the preferred or best business practices, or (3) meeting the special management needs of an individual agency. NASA will consider value-added features when judging systems options. The need for these value added features in NASA systems is left to the discretion of the NASA administrator.

i. **OMB Circular No. A -130, *Management of Federal Information Resources***. Prescribes policies for the management of information resources systems.

j. **OMB Circular No A -134, *Financial Accounting Principals and Standards***. Establishes the policies and procedures for approving and publishing financial accounting principles and standards.

k. **OMB Circular No. A -136, *Financial Reporting Requirements***. Establishes a central point of reference for all Federal financial reporting guidance for Executive Branch departments, agencies, and entities required to submit audited financial statements, interim financial statements, and Performance and Accountability Reports (PAR) under the Chief Financial Officers Act of 1990 ("CFO Act") (Pub. L. No. 101 - 576), the Accountability of Tax Dollars Act of 2002 ("ATDA") (Pub. L. No. 107 - 289), and Annual Management Reports under the Government Corporations Control Act (31 U.S.C. § 9101 et seq.).

l. **Federal Accounting Standards Advisory Board (FASAB)**. In October 1990, the Secretary of the Treasury, the Director of OMB, and the Comptroller General of the United States established FASAB to consider and recommend accounting principles for the Federal government. FASAB recommends accounting standards, which, if accepted by Congress and adopted by the Board's sponsor (OMB, Government Accountability Office (GAO), and Treasury), OMB publishes.

B.2 Applicable Documents

a. **NPD 2830.1, "NASA Enterprise Architecture."** Establishes the policy and responsibilities for NASA's Enterprise Architecture (EA).

b. **NPR 9010.3, "Financial Management Internal Control"**. Contains high level NASA requirements for financial systems internal controls.